

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

RECD 04 SEP 2006

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Applicant's or agent's file reference FIS920030250	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/US04/00987	International filing date ( <i>day/month/year</i> ) 15 January 2004 (15.01.2004)	Priority date ( <i>day/month/year</i> )	

International Patent Classification (IPC) or national classification and IPC

IPC: H05K 3/30( 2006.01)  
USPC: 29/741,740,759,729,407.01,833,834;198/468.2;414/737,744.3,744.8

## Applicant

INTERNATIONAL BUSINESS MACHINES CORPORATION

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

a.  (*sent to the applicant and to the International Bureau*) a total of 3 sheets, as follows:

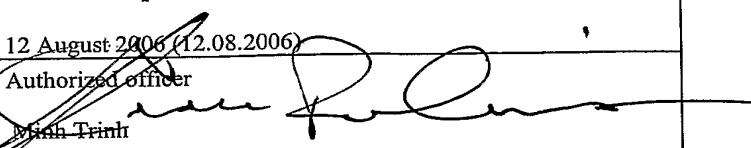
sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b.  (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 15 November 2005 (15.11.2005)	Date of completion of this report 12 August 2006 (12.08.2006)
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer  Minh Trinh Telephone No. (703) 308-1148

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on:

the international application in the language in which it was filed.

a translation of the international application into English, which is the language of a translation furnished for the purposes of:

- international search (under Rules 12.3 and 23.1(b))
- publication of the international application (under Rule 12.4(a))
- international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages 1-12 as originally filed/furnished

pages\* NONE received by this Authority on \_\_\_\_\_

pages\* NONE received by this Authority on \_\_\_\_\_

the claims:

pages NONE as originally filed/furnished

pages\* NONE as amended (together with any statement) under Article 19

pages\* 13-15 received by this Authority on 28 February 2005 (28.02.2005)

pages\* NONE received by this Authority on \_\_\_\_\_

the drawings:

pages 1-18 as originally filed/furnished

pages\* NONE received by this Authority on \_\_\_\_\_

pages\* NONE received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages None \_\_\_\_\_

the claims, Nos. 19-23 \_\_\_\_\_

the drawings, sheets/figs None \_\_\_\_\_

the sequence listing (*specify*): None \_\_\_\_\_

any table(s) related to the sequence listing (*specify*): None \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (*specify*): \_\_\_\_\_

any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US04/00987**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-18</u>	NO
Industrial Applicability (IA)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and Explanations (Rule 70.7)**

Claims 1-5 and 14 lack an inventive step under PCT Article 33(3) as being obvious over Caccoma et al in view of Arakawa et al. Caccoma et al teach the chip mounting system having at least one carrier 15 integrally holding a plurality of parts (24 A-C), an assembly area 13 having cavity provided with alignment means and a transport 37 for moving the at least one carrier (see Fig. 1, depicts a carrier 15, having means for alignment 35, 36 and a transport 37 for moving the carrier 15). Further, Fig. 1, shows the carriers and transport means being controlled by driving means 35 and 36. Caccoma et al however, do not teach the cavity being provided with a plurality of post to guide the carriers containing the parts into place within the cavity as that as recited in claims 1 and 2-5. Arakawa et al teach the above structural features (see Figs. 3-4, and the discussed at col. 5, lines 54-60). Therefore, it would have been obvious to one ordinary having skill in the art at the time the invention was made to employ the Arakawa's teachings as described above into the system invention of Caccoma et al in order to obtain a desired structure by using the available techniques.

Claims 6-13 lack an inventive step under PCT Article 33(3) as being obvious over Caccoma et al in view of Galli. Caccommas et al do not teach the limitations of claims 6-13 i.e., mechanical tab, and the remove by etching, mechanical destruction by current and laser ablation or the like. Galli teaches the use of mechanical tab (see Figs. 2-3, and the discussion at col. 2, line 45-68), further, Galli inherent discloses the removing of the tab, by etching and by means of ablation. Therefore, it would have been obvious to one ordinary having skill in the art at the time the invention was made to employ the Galli's teachings as described above into the system invention of Caccoma et al in order to form a desired structure having mechanical tab and the removing by etching and ablation associated therewith.

Claims 15-18 lack an inventive step under PCT Article 33(3) as being obvious over Caccoma et al in view of Koibuchi. Caccoma et al do not teach the system where the driving means comprise comb drives coupled to gears. Koibuchi teaches the structural features including comb drives and gears (see Fig. 17, and the discussed at col. 13, lines 45-57). Therefore, it would have been obvious to one ordinary having skill in the art at the time the invention was made to employ the Koibuchi's teachings as described above into the system invention of Caccoma et al as so to form a desired structure including that as described above (i.e., comb drives coupled to gears).

Claims 1-18 meet the criteria set out in PCT Article 33(4), because the invention is related to a system for fabricating of Chip device for use in the field of biomedical, aerospace or communications industries.

----- NEW CITATIONS -----